Letter of Transmittal

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To: Ms. Shari Kolak
Remedial Project Manager
USEPA Region V
77 W. Jackson Blvd. (SR-6J)
Chicago, IL 60604

Date: 9/11/06

Project No.: 5121.03

Subject: Approach for the Remedial Investigation at the Plainwell Mill site, Plainwell, Michigan

Prepared By: Linda E. Hicken **Title** Senior Project Manager

Signature: Linda Hicken/CRJ

We are sending you: ☒ Other: Figures

COPIES	DATE	NO.	DESCRIPTION
1	9/11/06		Figure 4-1 - RI/FS Groundwater Monitoring Well and Staff Gauge Locations (Preliminary Draft)
1	9/11/06		Figure 5-1 - RI/FS Soil Sampling Locations in the Former Wastewater Sludge Dewatering Lagoon and Aeration Basin Area (Preliminary Draft)
1	9/11/06		Figure 6-1 - RI/FS Soil Sampling Locations and Approximate Test Pit Locations in the Northcentral Portion of Site (Preliminary Draft)

These items are transmitted as checked below:

☒ For your use

Remarks:

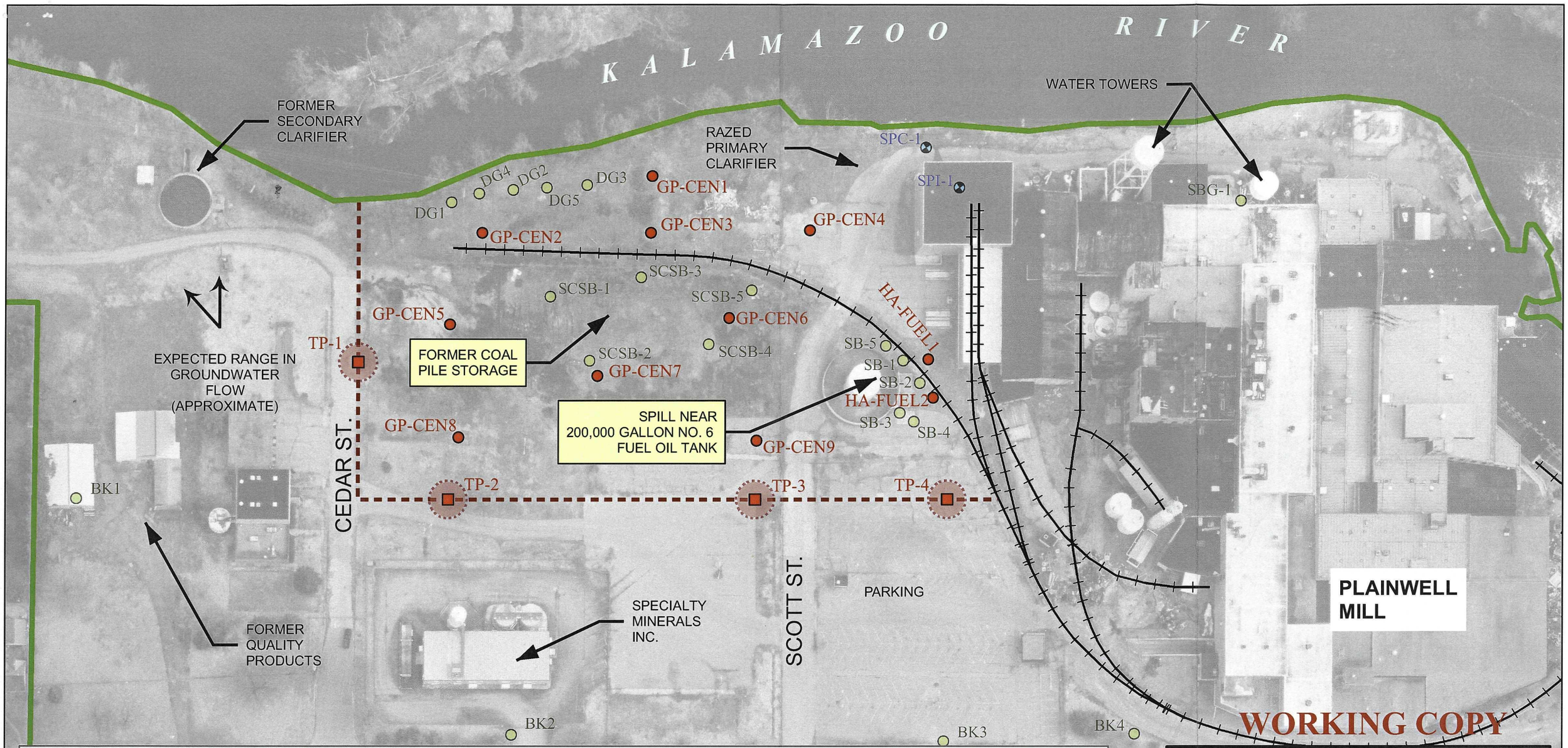
Enclosed for discussion during our conference call on Thursday, September 14, are figures illustrating Weyerhaeuser's approach for the Remedial Investigation at the Plainwell Mill site. After our discussion on Thursday, these figures, with any necessary revisions, will be incorporated into the draft Remedial Investigation/Feasibility Study Work Plan, which will be submitted to the USEPA on October 2.

We look forward to talking with you on Thursday.

Linda

Letter of Transmittal

cc: Mr. Sam Chummar – USEPA
Ms. Jennifer Hale – Weyerhaeuser Company
Ms. Kathy Huibregtse – RMT, Inc.
Mr. Steve Martin – RMT, Inc.
Ms. Karen Saucier – RMT, Inc.
Ms. Cassie Johnson – RMT, Inc.



LEGEND

- APPROXIMATE LOCATION OF RAILROADS (BBL, 1996)
- APPROXIMATE PROPERTY LINE (SURVEYED BY FTC&H ON 11/09/2005)
- PREVIOUS SOIL SAMPLE LOCATION (ERM, 1997)
- PREVIOUS SOIL SAMPLE LOCATION, FOR THE ANALYSIS OF PCBs (BBL, 1996)
- RI/FS SOIL SAMPLE LOCATION (APPROXIMATE)
- RI/FS TEST PIT LOCATION (CONCEPTUAL - LOCATION AND NUMBER OF TEST PITS TO BE DETERMINED IN THE FIELD)
- APPROXIMATE EXTENT OF FILL MATERIAL (TO BE VERIFIED AS PART OF THE RI)

0 50 100 FEET
1:1,200
1 inch equals 100 feet

NOTES

1. AERIAL PHOTOGRAPH FROM OAS, INC. (MARCH 30, 2005).
2. PROPERTY BOUNDARY TRANSFORMED APPROXIMATELY TO MICHIGAN STATE PLANE COORDINATE SYSTEM IN ORDER TO MATCH OTHER DATA SETS.
3. ADDITIONAL TEST PITS MAY BE INSTALLED TO THE SOUTH AND WEST OF TP-1 THROUGH TP-4, IF THE EXTENT OF FILL MATERIAL IS NOT FOUND AT THESE PREDETERMINED TEST PIT LOCATIONS.
4. PREVIOUS SOIL SAMPLES WITH "BK" IDENTIFIERS (e.g. BK3) WERE COLLECTED FOR THE PURPOSE OF ESTABLISHING BACKGROUND METALS CONCENTRATIONS (ERM, 1996).
5. A BUILDING ADDITION WAS CONSTRUCTED IN 1995 OVER THE AREA WHERE SPI-1 WAS COLLECTED IN 1994 (BBL, 1996).
6. THE LOCATION OF SBG-1 WAS ADJUSTED FROM THE LOCATION DEPICTED IN THE MAP PROVIDED BY ERM, IN ORDER TO BE APPROXIMATELY COINCIDENT WITH THE LOCATION OF THE FORMER GASOLINE UST.

PROJECT:	RI/FS WORKPLAN PLAINWELL MILL PLAINWELL, MICHIGAN
SHEET TITLE:	RI/FS SOIL SAMPLING LOCATIONS AND APPROXIMATE TEST PIT LOCATIONS IN THE NORTH CENTRAL PORTION OF THE SITE

DRAWN BY: PAPEZ J	SCALE: AS NOTED	PROJ. NO.:	00-05121.03
CHECKED BY:		FILE NO.:	51210311.mxd
APPROVED BY:	DATE PRINTED: 9/11/2006	**FIGURE 6-1**	
DATE: SEPTEMBER 2006			

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LEGEND

- APPROXIMATE LOCATION OF RAILROADS (BBL, 1996)
- APPROXIMATE PROPERTY LINE (SURVEYED BY FTC&H ON 11/09/2005)
- A — FORMER WASTEWATER SLUDGE DEWATERING LAGOONS
- PREVIOUS GROUNDWATER SAMPLE LOCATION (TEMPORARY MONITORING WELL) (ERM, 1997)
- RI/FS GROUNDWATER MONITORING WELL LOCATION (APPROXIMATE - MAY BE ADJUSTED BASED ON FIELD CONDITIONS [e.g. UTILITIES])
- RI/FS STAFF GAUGE LOCATION (APPROXIMATE)

0 50 100 200 FEET

1:2,400

1 inch equals 200 feet

NOTES

1. AERIAL PHOTOGRAPH FROM OAS, INC. (MARCH 30, 2005).
2. FORMER SLUDGE DEWATERING LAGOONS INTERPRETED FROM AERIAL PHOTOGRAPHS (1955, 1960, 1967, 1974, 1981, 1986, AND 1991) (BBL, 1996).
3. PROPERTY BOUNDARY TRANSFORMED APPROXIMATELY TO MICHIGAN STATE PLANE COORDINATE SYSTEM IN ORDER TO MATCH OTHER DATA SETS.

WORKING COPY

PROJECT:	RI/FS WORKPLAN PLAINWELL MILL PLAINWELL, MICHIGAN
SHEET TITLE:	RI/FS GROUNDWATER MONITORING WELL AND STAFF GAUGE LOCATIONS
DRAWN BY: PAPEZ J	SCALE: AS NOTED
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APPROVED BY:	FILE NO.: 51210305A.mxd
DATE: SEPTEMBER 2006	DATE PRINTED: 9/8/2006

FIGURE 4-1

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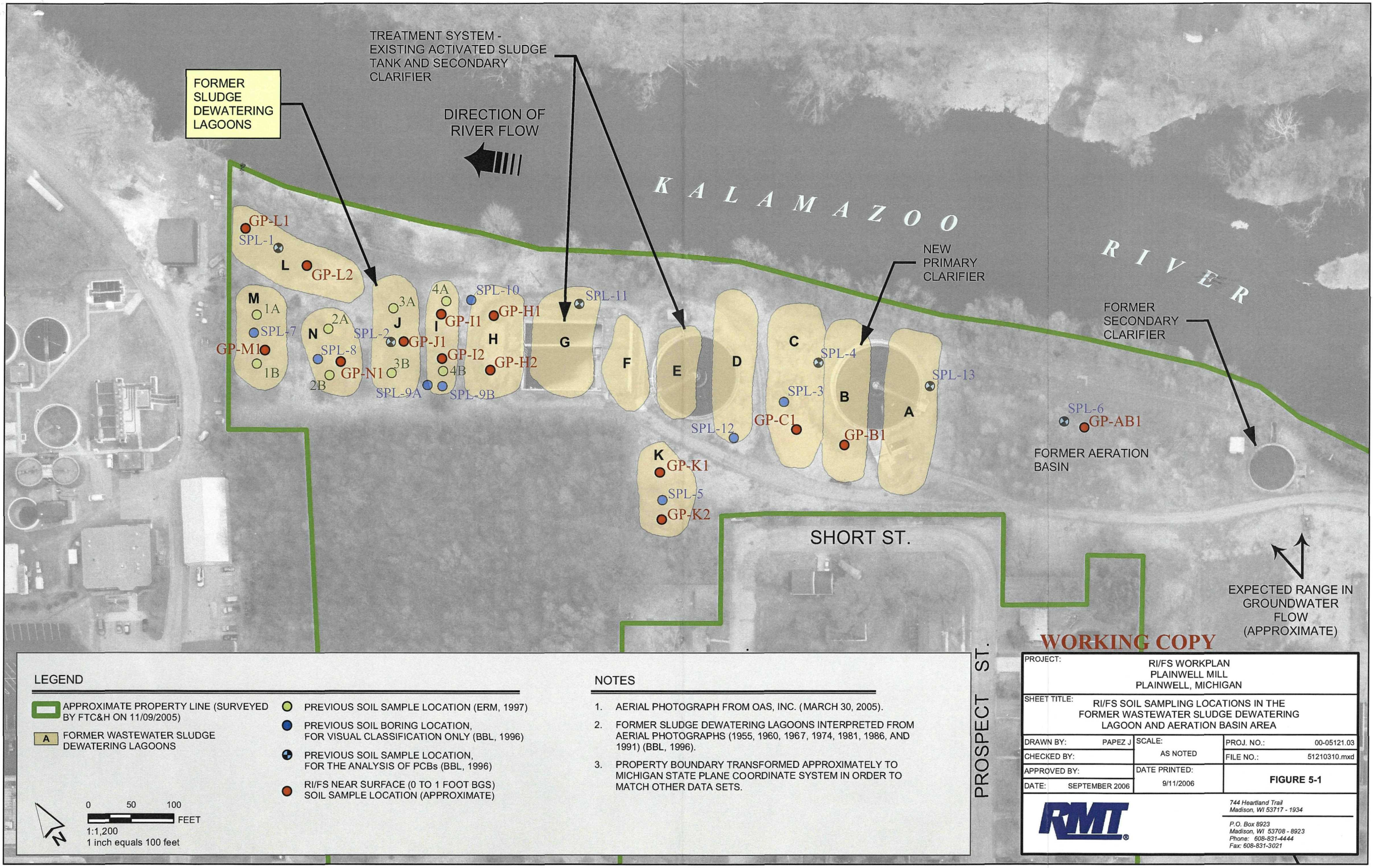

WORKING COPY

LEGEND

- APPROXIMATE PROPERTY LINE (SURVEYED BY FTC&H ON 11/09/2005)
- A — FORMER WASTEWATER SLUDGE DEWATERING LAGOONS
- PREVIOUS SOIL SAMPLE LOCATION (ERM, 1997)
- PREVIOUS SOIL BORING LOCATION, FOR VISUAL CLASSIFICATION ONLY (BBL, 1996)
- PREVIOUS SOIL SAMPLE LOCATION, FOR THE ANALYSIS OF PCBs (BBL, 1996)
- RI/FS NEAR SURFACE (0 TO 1 FOOT BGS) SOIL SAMPLE LOCATION (APPROXIMATE)

0 50 100 FEET
1:1,200
1 inch equals 100 feet

NOTES

1. AERIAL PHOTOGRAPH FROM OAS, INC. (MARCH 30, 2005).
2. FORMER SLUDGE DEWATERING LAGOONS INTERPRETED FROM AERIAL PHOTOGRAPHS (1955, 1960, 1967, 1974, 1981, 1986, AND 1991) (BBL, 1996).
3. PROPERTY BOUNDARY TRANSFORMED APPROXIMATELY TO MICHIGAN STATE PLANE COORDINATE SYSTEM IN ORDER TO MATCH OTHER DATA SETS.

PROJECT:	RI/FS WORKPLAN PLAINWELL MILL PLAINWELL, MICHIGAN		
SHEET TITLE:	RI/FS SOIL SAMPLING LOCATIONS IN THE FORMER WASTEWATER SLUDGE DEWATERING LAGOON AND AERATION BASIN AREA		
DRAWN BY: PAPEZ J	SCALE: AS NOTED	PROJ. NO.:	00-05121.03
CHECKED BY:		FILE NO.:	51210310.mxd
APPROVED BY:	DATE PRINTED: 9/11/2006	**FIGURE 5-1**	
DATE: SEPTEMBER 2006			

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Table 4-1
Summary of Media of Potential Environmental Concern and Remedial Investigation Approach
Plainwell Mill

AREA OF POTENTIAL ENVIRONMENTAL CONCERN	GROUNDWATER	NEAR-SURFACE SOIL (0 – 1 foot bgs)	DEEPER SOIL
1. The former wastewater sludge dewatering lagoon and aeration basin area	***Determination of Shallow Groundwater Quality and Flow Characteristics (6 wells)*** – Install six wells (1 upgradient and 5 downgradient), and collect and analyze samples for metals, PCBs, PAHs, and VOCs. Estimate hydraulic conductivity and gradient.	***Characterization of Near-Surface Soil (14 sample locations)*** – Collect 14 samples of near-surface soil, and analyze samples for metals, PCBs, and PAHs, in order to provide sufficient data for risk assessment.	***Vertical Extent of Overburden Soil*** – Advance borings using a Geoprobe® to visually determine and/or confirm the thickness of overburden soil (i.e., topsoil and sand fill) that overlies the waste materials. No samples will be collected for chemical analysis in the wastewater residuals or deeper soil because the RI will be focused on the potential exposure pathways for the potential constituents of concern in these media (i.e., the direct contact and groundwater pathways). The soil data from the near-surface (0 to 1 foot) sampling program will be used to evaluate potential direct contact risk. The groundwater data from the monitoring wells located upgradient and downgradient of this area will be used to determine if the media contained in the former wastewater sludge dewatering lagoons and aeration basin pose a potential risk to groundwater or to groundwater discharging to the river (i.e., the GSI pathway).
2. The central portion of the site	***Determination of Shallow Groundwater Quality and Flow Characteristics (4 wells)*** – Install four wells (1 upgradient and 3 downgradient), and collect and analyze samples for metals, PCBs, PAHs, and VOCs. Estimate hydraulic conductivity and gradient.	***Characterization and Extent of Former Coal Pile Storage and Subsurface Fill Area (9 sample locations)*** – Delineate the horizontal extent of the area with visible coal fragments present in the near-surface soil, using visual observations, hand tools, and/or hand-augers. Collect nine samples of near-surface soil (GP-CEN1 through GP-CEN9), and analyze samples for metals and PAHs. If the soil that is present very near to the ground surface (e.g., 0 to 2 inches below ground surface) contains a considerably higher percentage of visible coal fragments than the remaining portion of the near-surface soil sample, this soil interval will be segregated and not analyzed with the remainder of the soil sample. Instead, one to three samples of the highly coal-containing portion would be analyzed separately, for metals and PAHs.	***Characterization and Extent of Former Coal Pile Storage and Subsurface Fill Area (7 sample locations)*** – Delineate the horizontal extent of the area with coal fragment–containing fill present in the deeper soil, through visual observations and the use of a small excavator to install test pits. The actual number and locations of these test pits would be based on field observations. Collect samples of fill material at seven locations (GP-CEN3 through GP-CEN9), and analyze the samples for metals and PAHs. At approximately half of these locations (i.e., 4 locations), an additional soil sample would be collected from the soil layer located directly below the fill material and analyzed for metals and PAHs, in order to define the vertical extent of potential constituents of concern. Deeper soil samples will not be collected at GP-CEN1 and GP-CEN2 because the purpose of these borings is to determine the horizontal extent of the potential near-surface soil risk, which was identified at DG-3 and DG-4 (ERM, 1996).
		Characterization and Extent of the Spill Area Near the No. 6 Fuel Oil Tank (2 sample locations) – Delineate the horizontal extent of the area with surface staining in the near-surface soil, using visual observations, hand tools, and/or hand-augers. Collect two samples of near-surface soil, and analyze the samples for metals and PAHs.	***Characterization and Extent of Spill Area Near the No. 6 Fuel Oil Tank (2 sample locations)*** – Define the vertical extent of soil staining using hand-augers or a Geoprobe®. Collect two samples of the soil layer that is present beneath the near-surface staining, and analyze the samples for metals and PAHs.
3. The mill buildings and the immediate proximity of the buildings	***Determination of Shallow Groundwater Quality and Flow Characteristics (3 wells)*** – Install three wells (1 upgradient and 2 downgradient), and collect and analyze samples for metals, PCBs, PAHs, and VOCs. Determine hydraulic conductivity and gradient.	Historical information does not indicate areas of near-surface soil that pose a potential environmental concern.	Historical information does not indicate areas of deeper soil that pose a potential environmental concern.
Total	**13 wells**	**25 to 28 near-surface samples at 25 locations, plus additional locations with visual observations only**	**Approximately 13 deeper soil samples at nine locations, plus additional locations with visual observations only**